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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,021	03/12/2001	Mark Thomas Johnson	PHNL 000099	8873

24737 7590 10/12/2007

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

ART UNIT PAPER NUMBER

DATE MAILED: 10/12/2007

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/804,021
Filing Date: March 12, 2001
Appellant(s): JOHNSON ET AL.

Darrin Wesley Harris
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/9/07 appealing from the Office action mailed 5/3/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,518,962	Kimura et al	2-2003
6,549,179	Youngquist et al	4-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
3. Claims 1, 4-10, 13-16, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura et al. (US Patent No. 6,518,962) in view of Youngquist et al. (US Patent No. 6,549,179).

As to claims 1,9, 15, Kimura et al discloses a display device comprising electroluminescent pixels (224, Fig. 19) and a drive element (209, 200b, Fig. 19) comprising means for detecting (110) and adjusting (209) radiation emitted by the pixels and correction means (209) for correcting the radiation of the pixels based upon the detection of the light radiation from the pixel.

It is noted that Kimura does not specifically disclose correction means for correcting the adjustments for an influence of detected ambient light radiation, characterized in that the correction means comprises at least one reference photosensor of detecting the ambient radiation, wherein the at least one reference photosensor is shield from the emitted radiation.

Youngquist is cited to teach a LED display device similar to Kimura. Youngquist further discloses a photosensor (24) for detecting ambient light and adjusting the brightness (or current applied to the LED) based on the ambient light detected by the photosensor. Youngquist further discloses that the print circuit board also includes an aperture 24 for a photosensor (e.g. used to sense ambient light levels and thus provide feedback control to the desired brightness level of the display in different ambient light conditions (col. 4, lines 25-43). In other words, the photosensor is positioned inside the display panel; the light emitted from the LED element is not exposure to the photo sensor. Thus, the photosensor is shield from the emitted radiation from the LED elements. It would have been obvious to one of ordinary skill in the art to have modified the correction circuit of Kimura with the additional features of the ambient light adjustment as taught by Youngquist so that the brightness can be adjusted based on the influence of the detected ambient light.

As to claims 4, Kimura as modified by Youngquist discloses the drive element means for performing computing operations (16", 209, Fig. 19) on photocurrent (parameter) values obtains via the at least one reference photosensor.

As to claim 5, Youngquist discloses a functional unit (e.g. circuit board 22) of which the least one reference photosensor (24) forms part.

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As to claims 6, 10, 16, Youngquist discloses that the photosensor is formed at the circuit board. Obviously, any component formed in the circuit could be detachable.

As to claims 7, 19, Kimura discloses that the pixels are arranged in the form of a matrix (Fig. 19).

As to claims 8, 20, Kimura discloses the pixels are connected to row and/or column electrodes via switches (221, 223, Fig. 19).

As to claims 13, 18, it is well known in the art that a device such as touch screens can be operably connected (or integrated to the LED display device).

As to claim 14, Kimura discloses computing unit (16", 207, 209) stored the signal from the reference photosensor (110, Fig. 19).

(10) Response to Argument

Appellant admits that Youngquist does teach a need for an anti-reflection coating on printed circuit board 22 to thereby minimize any reflection of the radiation emitted from LEDs 20 by the printed circuit board 22, and Youngquist further teaches a need to employ a polarizing filter 56 that blocks any reflections by printed circuit board 22 of the radiation emitted by LEDs 20 (col. 6, lines 6-9 and at col. 8, lines 10-24 of Youngquist). Then, appellant concludes that it is therefore unequivocally clear that Youngquist acknowledges that a portion of the radiation emitted among the LEDs 20 adjacent aperture 24 follows a path from such adjacent LEDs 20 to the opening of aperture 24 whereby Youngquist desires for such light not to be reflected by printed circuit board 22 and for polarizing filter 56 to block any portion of such light that is nonetheless reflected by printed circuit board 22 (i.e., aperture 24 is not isolated from LEDs as asserted by examiner). These arguments are not persuasive because Youngquist clearly teaches

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that the sensor is for sensing ambient light level for providing feedback control to the desired brightness level for the display in different ambient light conditions (col. 4, lines 34-38) and it is located within the aperture (24). Thus, it is clearly that Youngquist's sensor is only for sensing the ambient light and would not be effected by the light emitted by the light emitting elements (LEDs). If the ambient light sensor is not shield from the light emitting elements, the ambient light sensor of Youngquist would not provide a proper feedback control signal to the display driver and the display brightness would not be controlled properly under different ambient light conditions.

Furthermore, Youngquist clearly discloses a polarizing filter 56 circularly polarizes light passing there through which that any reflections from the surface of the LED display PCB 22 are blocked (e.g. because they take on a reverse polarization upon reflection). In addition, as explained in more details below, the surface mounted LED array on PCB 22 is preferably coated with an anti-reflective coating and the polarizing filter works to provide a remarkable degree of anti-glare for the LED display assembly of Fig. 5. The anti-glare coated LEDs 20 are of course only schematically depicted in Fig. 5 insofar as numbers and dimensions are concerned (see col. 6, lines 2-14). In view of the fact that the sensor is located within the aperture and the facts that there is no reflection of light radiation within the PCB 22, the ambient light sensor of Youngquist is shielded from the light radiation of the light emitting elements.

Furthermore, it would be obvious to one of ordinary skill in the art to realize that the location of the ambient light sensor could be located at different locations such as far from the light-emitting element so that the ambient light sensor could be totally isolated and shielded from the light radiation from the display element itself.

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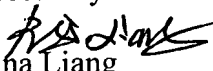
Appellant further traverses the obviousness rejection of independent claims 1, 9 and 15 and argues that the combination of Kimura and Youngquist fails to teach or suggest “wherein the at least one reference photosensor is shielded from the emitted radiation” as recited in independent claim 1; “at least one reference photosensor optically shielded from the emitted radiation for detecting ambient radiation” as recited in independent claim 9; and “at least one reference photosensor arranged for detecting ambient radiation without detecting radiation emitted by the electroluminescent pixels” as recited in independent claim 15. Appellant’s arguments are not persuasive because Youngquist as mentioned above clearly teaches an ambient light sensor for sensing the ambient light condition only and shielded from the LEDs. Kimura as modified by Youngquist would provide a display control circuit with two sensors, one for sensing the light emitted from the display element, another for sensing the ambient light condition. The combination of Kimura and Youngquist would provide an enhancement control for the brightness of the display panel.

(11) Related Proceeding(s) Appendix


No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


Regina Liang
Primary Examiner

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